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RESEARCH NOTE
THE STRENGTHS AND WEAKNESSES OF TOTAL COST OF OWNERSHIP

THE BOTTOM LINE

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Total cost of ownership (TCO) is a metric frequently used by companies when they evaluate technology. TCO is the total cost of owning a particular item over some time horizon and includes both the acquisition cost and the total cost per year. In some cases this total is averaged over a three or five year period to get a comparable estimate of ongoing expenses. TCO has a number of strengths as a metric and it is important to calculate when evaluating technology, but it also has a number of weaknesses that need to be understood if management is to properly use TCO results. Unfortunately too many companies rely on the total cost of ownership as the sole metric when making a decision.

The strength of TCO is in providing an understanding of future costs that may not be apparent when an item is initially purchased. However, the metric focuses only on cost and companies that rely entirely on TCO end up following a strategy that minimizes expenditures rather than maximizes the return for the company. These companies are ensuring they purchase the least costly application, but they are rarely choosing the application that provides the greatest impact for the bottom line.

CALCULATING TCO

In most cases calculating total cost of ownership is a straightforward effort that can be applied to both technology and non-technology decisions. Nucleus recommends calculating TCO over at least a three-year period to get a full understanding of the ongoing costs associated with an application. Costs include initial acquisition costs of software and hardware along with support and consulting costs in the pre-start period. Costs in later years included maintenance and upgrades along with user training and ongoing IT support.

The yearly TCO figure is an excellent indicator of the ongoing costs and is best used as a projection for budgeting purposes. Averaging the TCO over the time horizon provides a reasonable metric for comparing similar applications. One note of caution with average TCO is that it does not provide insight into the timing of the costs. A product with low acquisition costs and high maintenance is likely to be less attractive than one with higher acquisition and lower ongoing costs but may have a similar TCO over the period analyzed.

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FIGURE 1

COMPARISON OF THE USE OF FINANCIAL METRICS

	Product Comparison	IT Budgeting	Focus
TCO	POOR Highlights only lowest cost solution.	BEST Accurate indicator of future expenses.	Very quantifiable metric for the cost conscious
ROI	BEST Provides an accurate balance of cost vs. return.	POOR Little indication of the actual expenses per year.	Tries to indicate the best solution for the corporate bottom line.
Payback	GOOD Best indicator of the risk associated with an application.	POOR As a derivative of the ROI calculation it doesn't show expenses.	Used with ROI it can help assure maximum flexibility and return.

MAXIMIZING RETURN

The problem with total cost of ownership is that used alone it provides a single narrow view of just the costs associated with an application. TCO completely ignores the benefits. For most companies the objective is not to choose the cheapest application but to choose the application that provides the greatest benefit or return for the company. The Holy Grail for IT is not minimizing the cost technology, but maximizing benefit from it. For example, you may be able to build your e-commerce web site using a part-time intern and Microsoft Front Page, but are you really getting the greatest return you could receive?

Many companies along with the press have focused on TCO as an important metric primarily because it's a tangible number. It is easy to point to a complete accounting of cost and make a decision based on a strategy of reducing expenditures. But technology can have a dramatic impact on the bottom line and TCO only ensures you purchase the cheapest solution, not the best.